

SHORT COMMUNICATION

***Hemigenia tichbonii* (Lamiaceae), a new, rare species from Western Australia**

Hemigenia tichbonii K.R.Thiele & G.R.Guerin, *sp. nov.*

Type: Mount Gibson Wildlife Sanctuary, Western Australia [precise locality withheld for conservation reasons], 6 October 2015, *M. Hislop & F. Lewis* MH 4517 (*holo:* PERTH 08705984; *iso:* AD, CANB).

Hemigenia sp. Gibson (R. Coveny 7893 & B.R. Maslin), Western Australian Herbarium, in *FloraBase*, <https://florabase.dpaw.wa.gov.au/> [accessed 20 February 2016].

Openly branched *shrubs* 0.4–1.5 m high, to 1.5 m diam., usually erect but sometimes ± prostrate; *branchlets* glabrous or with very sparse, scattered, minute white hairs in and around the leaf axils, ± cylindrical to slightly triquetrous, grooved along the faces. *Leaves* usually in whorls of 3 (some opposite), sessile, patent and straight to slightly incurved, glabrous or with a few minute white hairs near the axil; lamina linear, appearing terete due to the tightly inrolled margins, grooved adaxially, 15–25(–30) × 0.5–0.7 mm; base tapering; apex acute. *Flowers* single in upper leaf axils; *pedicels* 6–10 mm long, glabrous, often persistent after fruits have fallen; *bracteoles* inserted 0.5–2.0 mm below the calyx, erect to slightly spreading, 1.5–4.0 mm long at anthesis, linear and adaxially grooved like the leaves, glabrous. *Calyx* slightly zygomorphic, 3.0–4.5 mm long, glabrous outside or with minute hairs concentrated towards the base, sparsely hairy inside with short, curved, white hairs and sessile glands; tube campanulate, slightly ribbed; lobes all ± similar (the dorsal slightly larger), 1.0–1.5 mm long, obtuse to apiculate, reticulately veined between main veins that terminate at the apex of each lobe. *Corolla* 10–16 mm long, lilac, paler in the throat where there are scattered, purplish to brownish blotches, with scattered, globular glands outside (most prominent in bud and mostly absent from the open flower) and short, curved, white hairs near the sinuses, inside with sparse, curved, white hairs at the base of each lobe and towards the base of the tube; abaxial median lobe flabellate, bilobed, 3–5 mm long; lateral lobes obtrullate, emarginate, 2–4 mm long; adaxial median lobes 2.0–3.5 mm long (shorter than the abaxial lobe), with a short sinus *c.* 1 mm long. *Stamens* included in the throat, the abaxial pair *c.* 4 mm long, the adaxial pair shorter; filaments with short, white hairs towards the base; anthers dimidiate, the abaxial pair with two unequal thecae, the adaxial pair with a single theca (lower end sterile and bearded). *Style* *c.* 10 mm long, bilobed, with short, white hairs towards the base. *Fruiting calyx* papery, not or scarcely accrescent. *Mericarps* subglobular, cerebriform, *c.* 2 mm long, rounded on the outer face, angled between the inner faces, pale brown. (Figure 1)

Diagnostic features. *Hemigenia tichbonii* is distinguished from all other species in the genus occurring in Western Australia by the combination of mostly 3-whorled, linear-terete leaves that are grooved above, and cerebriform mericarps.

Other specimens examined. WESTERN AUSTRALIA: [localities withheld for conservation reasons] 24 Oct. 1984, *M.G. Corrick* 9330 (MEL, PERTH); 29 Aug. 1976, *R. Coveny* 7893 & *B.R. Maslin*

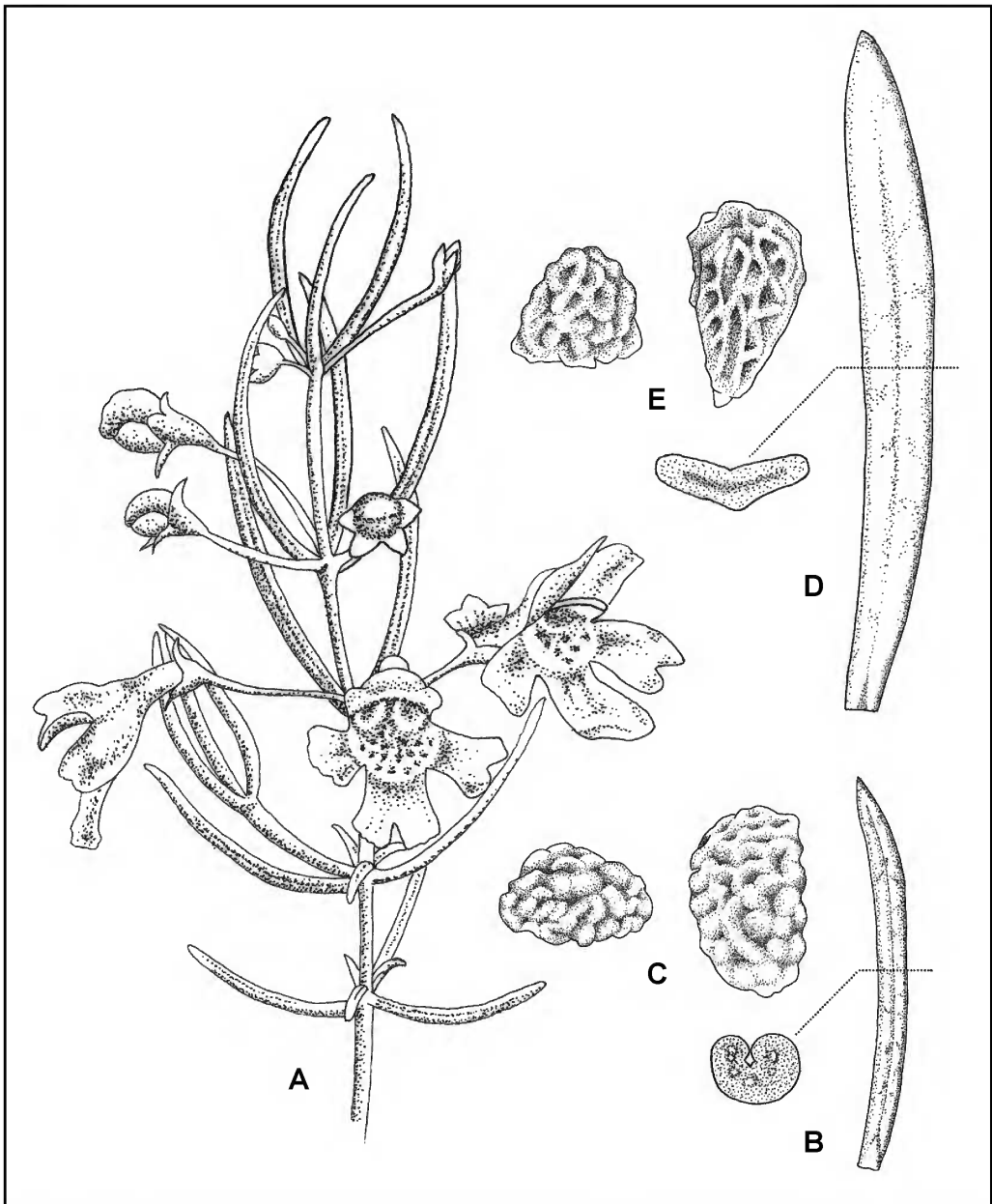


Figure 1. A–C *Hemigenia tichbonii*. A – flowering branch; B – leaf with TS; C – mericarp lateral view (right) and apical view (left). D, E *H. ramosissima*. D – leaf with TS; E – mericarp lateral view (right) and apical view (left). Drawn by Skye Coffey from *M. Hislop & F. Lewis* MH 4517 (A–C), *T. Erickson* TEE 320 (D, E).

(PERTH); 22 Oct. 2002, G. Guerin 050 & P. McLachlan (AD); 8 Oct. 2015, M. Hislop & F. Lewis MH 4544 (PERTH); 23 Aug. 2011, F. Lewis MGFL 223 (PERTH); 25 Aug. 2011, F. Lewis MGFL 256 (PERTH); 17 Oct. 1975, J.Z. Weber 5160 (MEL).

Phenology. Flowering specimens have been collected in August and October.

Distribution and habitat. Currently known from three localities c. 65 km apart, two west and south-west of Paynes Find and the other on Mount Gibson Wildlife Sanctuary, in the Yalgoo bioregion (Department of the Environment 2013; Figure 2). Occurs in semi-arid, open shrublands over granite or greenstone.

Conservation status. *Hemigenia tichbonii* is listed by Jones (2015) as Priority One under Department of Parks and Wildlife Conservation Codes for Western Australian Flora, under the name *H. sp.* Gibson (R. Coveny 7893 & B.R. Maslin). The species is locally abundant over small areas at Mount Gibson.

Etymology. Named in honour of Mr Michael Tichbon, a Western Australian conservationist and philanthropist. Mr Tichbon has made a substantial contribution to the conservation of the flora of south-western Australia, including as a long-time supporter of the Australian Wildlife Conservancy (AWC), which manages Mount Gibson Wildlife Sanctuary where *H. tichbonii* occurs.

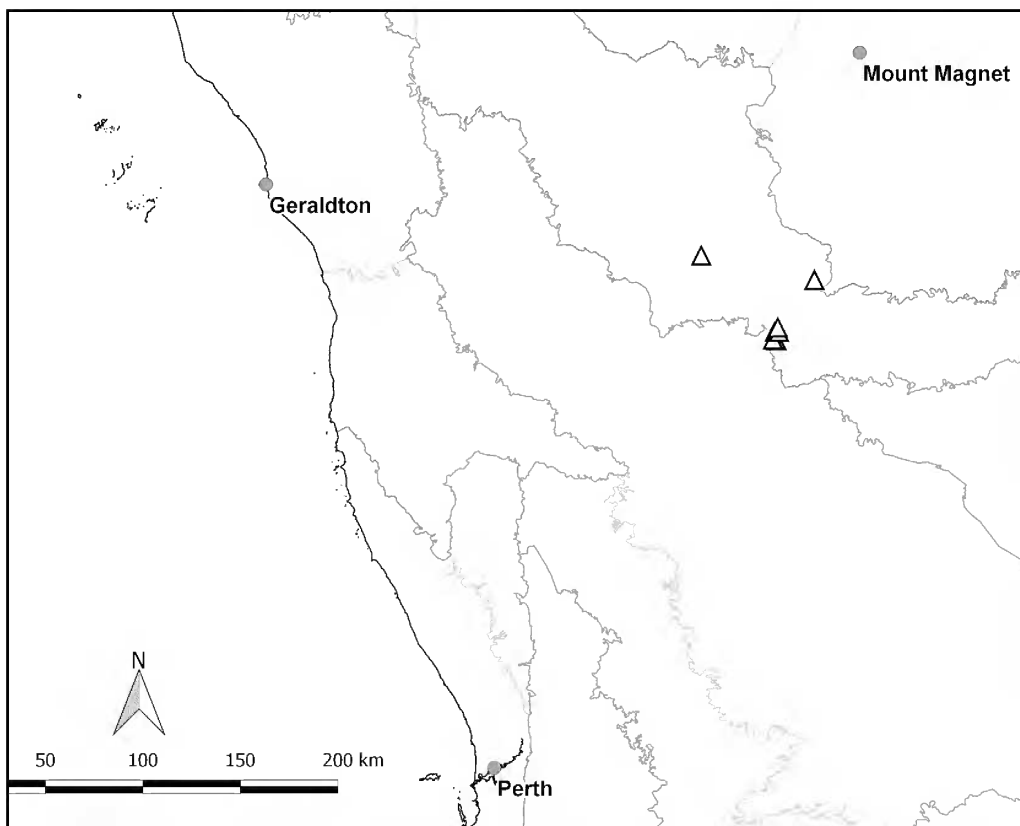


Figure 2. Distribution of *Hemigenia tichbonii*. Shaded lines indicate boundaries of IBRA7 subregions (Department of the Environment 2013).

Affinities. Morphologically closest to *H. ramosissima* Benth., the two species sharing pedicellate flowers, narrow, whorled leaves and calyces that are shortly 5-lobed. Key features that distinguish *H. tichbonii* from *H. ramosissima* are the linear leaves with margins tightly inrolled and joined to form an adaxial groove (*cf.* linear to narrowly elliptic and flat with the margins flat to slightly incurved), and young stems that are glabrous except for a few hairs in and around the leaf axils (*cf.* with distinct lines of short, curved, white hairs in the stem grooves). The mericarps of *H. ramosissima* are reticulately rugose with the depressions open and relatively shallow, compared with the cerebriform (brain-like) mericarps of *H. tichbonii*. *Hemigenia ramosissima* occurs near Arthur River, more than 400 km south of the distribution of *H. tichbonii*.

Several other species of *Hemigenia* R.Br. in the Yalgoo and adjacent IBRA regions have linear leaves and a similar habit to *H. tichbonii*. Of these, *H. ciliata* G.R.Guerin has leaves that are viscid or have crowded sessile glands, *H. macphersonii* Luehm. and *H. yalgensis* G.R.Guerin have conduplicate leaves and a 2-lipped calyx with the tube thickly beset with stiff, white hairs, and *H. westringioides* Benth. has a calyx evenly covered with short white hairs. *Hemigenia ciliata* and *H. westringioides* also have consistently opposite rather than whorled leaves.

References

- Department of the Environment (2013). *Australia's bioregions (IBRA)*, IBRA7, Commonwealth of Australia. <http://www.environment.gov.au/land/nrs/science/ibra#ibra> [accessed 24 November 2015].
- Jones, A. (2015). *Threatened and Priority Flora list for Western Australia*. (Department of Parks and Wildlife: Kensington, Western Australia.)

Acknowledgements

We thank Atticus Fleming and Fay Lewis for assistance and access to Mount Gibson Wildlife Sanctuary, and for collecting specimens of *H. tichbonii*. Mike Hislop provided invaluable advice, while Barbara Rye and Trevor Wilson made useful comments on the ms. We particularly thank Skye Coffey for preparing the illustration. *Hemigenia tichbonii* was first recognised as distinct and phrase-named by Barbara Rye. We thank the Directors and staff of the State Herbarium of South Australia and the Western Australian Herbarium for support and access to collections. Study of *H. tichbonii* was facilitated in part by funding from the Australian Wildlife Conservancy.

Kevin R. Thiele^{1,2,4} and Greg Guerin³

¹Western Australian Herbarium, Department of Parks and Wildlife, Locked Bag 104, Bentley Delivery Centre, Western Australia 6983

²School of Plant Biology, The University of Western Australia, 35 Stirling Highway, Crawley, Perth, Western Australia 6009

³The University of Adelaide, South Australia 5005

⁴Corresponding author, email: kevin.thiele@uwa.edu.au